## SOURCE WATER ASSESSMENT REPORT

AN EVALUATION OF THE SUSCEPTIBILITY OF PUBLIC DRINKING WATER SOURCES TO POTENTIAL CONTAMINATION

CT1030021

# Second Taxing District Of Norwalk Norwalk Reservoir System

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Environmental Protection (DEP) recently completed an initial assessment of the Norwalk Reservoir System, which is a source of public drinking water that is maintained and operated by the Second Taxing District Of Norwalk. This one-time assessment is part of a nationwide effort mandated by Congress under the Safe Drinking Water Act Amendments of 1996 to evaluate the susceptibility of all public drinking water sources in Connecticut to potential sources of contamination. DPH began working in partnership with the DEP in 1997 to develop Connecticut's Source Water Assessment Program, which was approved by the U.S. Environmental Protection Agency in 1999. Sources of potential contamination that are of concern to public drinking water supplies here in Connecticut are generally associated with historic waste disposal or commercial, industrial, agricultural and residential properties that store or use hazardous materials like petroleum products, solvents or agricultural chemicals.

The assessment is intended to provide Second Taxing District Of Norwalk consumers with information about where their public drinking water comes from, sources of potential contamination that could impact it, and what can be done to help protect it. This initial assessment complete will also assist the public water supply system, regional planners, local government, public health officials and state agencies in evaluating the degree to which the Norwalk Reservoir System may be at risk from potential sources of contamination. The assessment can be used to target and implement enhanced source water protection measures such as routine inspections, protective land use regulations, acquisition of critical land, proper septic system maintenance, and public education. General sources of contamination with the potential to impact the Norwalk Reservoir System include properties with underground fuel storage tanks, improperly maintained on-site septic systems, improper waste disposal, or commercial/industrial sites that store or use chemicals or generate hazardous wastes.

## Norwalk Reservoir System Source Water Assessment Summary

### **STRENGTHS**

Point source pollution discharge points not present in this watershed area

More than 20% of the land in the watershed area exists as preserved open space

#### POTENTIAL RISK FACTORS

Potential contaminant sources present in the watershed

Less than 20% of watershed area owned by public water system

Susceptibility Rating					
			Source		
	Environmental	Potential Risk	Protection		
Rating	Sensitivity	Factors	Needs		
Low	X	X			
Moderate			Χ		
High					

#### Overall Susceptibility Rating: Low

This rating indicates susceptibility to potential sources of contamination that may be in the source water area and does not necessarily imply poor water quality.

Detailed information about the specific factors and information used in establishing this rating can be found in Table 2. Information about opportunities to improve protection in the Norwalk Reservoir System is also presented in Table 2.



State of Connecticut Department of Public Health

#### **Drinking Water Division**

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Keeping Connecticut Healthy

**OVERVIEW** - The Norwalk Reservoir System watershed encompasses some 6,272 acres of land in Ridgefield, New Canaan, Wilton and New York State. Approximately 18.8% of this watershed is owned by the Second Taxing District Of Norwalk. Public drinking water sources in this system include City Lake, Pope's Pond, Rock Lake, New Canaan reservoirs and the Middlebrook Diversion. State-wide satellite imagery developed by the University of Connecticut indicates that undeveloped land and residential properties presently account for approximately 82.9% percent of the land cover in the Norwalk Reservoir System. Commercial development at 0.5% and agricultural land use at 16.6% account for the remainder of the land coverage in the source water area. Approximately 28.6% of the land in the watershed area is preserved including all watershed land owned by the Second Taxing District Of Norwalk, state forest and parklands, and municipally or privately held land designated as open space. Information about drinking water quality and treatment is available in the Second Taxing District Of Norwalk's annual Consumer Confidence Report.

#### ASSESSMENT METHODS.

The drinking water source assessment methods used by the Department of Public Health Drinking Water Division to evaluate the susceptibility of public drinking water sources to contamination are based on criteria individually tailored to surface water and groundwater sources. The criteria are keyed to sanitary conditions in the source water area, the presence of potential or historic sources of contamination, existing land use coverage's, and the need for additional source protection measures within the source water area. Source-specific data for community and non-community systems were used to determine whether a particular criterion should be rated as low, moderate or high, relative to the risk of potential contamination at the drinking water source. Further, a ranking system was used to compute an average rank for each community drinking water source based on its environmental sensitivity, potential risk of contamination and source protection needs. Watersheds and reservoirs rated as having a low, moderate or high susceptibility to potential sources of contamination generally exhibit the characteristics summarized in Table 1.

Table 1 - General Watershed Area Characteristics and Susceptibility Ratings		
Susceptibility Rating	General Characteristics of the Watershed Area*	
Low	Low density of potential contaminant sources	
	Lower intensity of land development	
Moderate	Low to moderate density of potential contaminant sources	
	Moderate intensity of land development	
High	Moderate to high density of potential contaminant sources	
	Higher intensity of land development	
	No local watershed protection regulations	
	Detectable nitrates and/or volatile organic chemicals in the untreated source water	
	during the past three years that are below the maximum contaminant levels	
	allowed by state and federal drinking water regulations	

Table 1 – General Watershed Area Characteristics and Susceptibility Ratings

Readers of this assessment are encouraged to use the attached glossary to assist in the understanding of the terms and concepts used throughout this report.

Maps representing the location and features of the Norwalk Reservoir System source water area have not been included with this assessment report because of homeland security concerns.

#### NORWALK RESERVOIR SYSTEM ASSESSMENT RESULTS.

Based on a combination of current reservoir and watershed area conditions, existing potential contaminant sources, and the level of source protection measures currently in place, the source water assessment for this watershed system indicates that it has an overall Low risk of contamination from any identified potential sources of contamination. The assessment findings for the Norwalk Reservoir System are summarized in Table 2, which lists current conditions in the source water area and recommendations or opportunities to enhance protection of this public drinking water source. A listing of potential contaminant source types in the area, if present, can be found in Table 3. A summary of source water area features is shown in Table 4.

The assessment of this and other comparable watershed areas throughout Connecticut generally finds that adopting recommendations similar to those presented in Table 2 could reduce the susceptibility of most surface water sources to potential sources of contamination.

<sup>\*</sup> Note: Not all characteristics may be present for a given susceptibility rating

Table 2 Source Water Assessment Findings and Source Protection Opportunities For the Norwalk Reservoir System

Assessment	Conditions as of June 2002	Recommendations and Source Protection Opportunities
Category		••
Environmental	Predominant watershed topography characterized by gentle slopes	Monitor runoff during heavy precipitation events
Sensitivity Factors	Reservoirs have moderate to high capacity to support excessive growths of	Monitor reservoir nutrient levels for source waters classified as eutrophic
	algae and plankton	or mesotrophic.
Contaminants	None	
Detected in	Click here to review EPA's current drinking water standards	Encourage homeowners to adopt residential best management practices
<b>Untreated Source</b>		that minimize the use of hazardous materials or generation of hazardous
Water		waste in the watershed.
	Potential contaminant sources present in the watershed	Periodically inspect these sites and maintain a water quality monitoring
		program consistent with the level of potential risk
	More than 50% of land for this source water area is undeveloped, which	Proactively work with local officials and developers to insure that only
	could present a risk if developed inappropriately.	low-risk development occurs within the watershed area
	Major state or interstate roadways present in the watershed	Monitor road salt and herbicide usage along these roadways and address
Potential Risk		potential for hazardous material spills resulting from vehicular accidents
Factors	Known contaminant release points not present in the watershed	
		Encourage residential property owners to inspect and regularly cleanout
		onsite septic systems and replace underground fuel storage tanks with above ground tanks.
	Less than 20% of watershed area owned by public water system	Increase ownership or control of watershed area whenever land becomes
	less than 20% of watershed area owned by public water system	available for purchase or support land acquisition by public or private
		conservation/preservation organizations
<b>Source Protection</b>		Develop or enhance local governmental plans and policies that favor the
Needs Factors		protection of public drinking water sources
	Point source pollution discharge points not present in this watershed area	
		Support environmental awareness and education within the community.
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Inventoried significant potential contaminant sources present in the Norwalk Reservoir System source water area are listed in Table 3. While these facilities, if present, have the potential to cause surface water contamination; there is no indication that they are doing so at this time.

Table 3 – Summary of Significant Potential Contaminant Types in the Norwalk Reservoir System Source Water Area

		Number of
Category	Subcategory	SPCS Types
	Hazardous Waste Facilities	0
Waste Storage, Handling, Disposal	Solid Waste Facilities	0
	Miscellaneous	0
	Underground Storage Tanks	1
Bulk Chemical, Petroleum Storage	Tank Farms	0
	Warehouses	0
	Chemical & Allied Production	0
Industrial Manufacturing / Processing	Chemical Use Processing	0
	Miscellaneous	0
	Automotive and Related Services	0
Commercial Trades and Services	Chemical Use Services	0
	Miscellaneous	0
Miscellaneous	No Identifiable SPCS Type	0
Agricultural Operations	Animal or Livestock Waste Handling	0
Agricultural Operations	Pesticide Storage or Application	0
Total Number of Contaminant Types	1	

Prominent features of the Norwalk Reservoir System source water area are summarized in Table 4.

Table 4 - Features of the Norwalk Reservoir System

Location of Watershed Area	Ridgefield, New Canaan, Wilton and New York State	
Name of Reservoir(s) and Diversion(s)	City Lake, Pope's Pond, Rock Lake, New Canaan	
Traine of Traser, on (a) and Diversion (b)	reservoirs and the Middlebrook Diversion	
Number and Type of Public Drinking Water Reservoirs or Diversions		
in the Watershed	1 Distribution, 3 Storage, and 1 Diversion	
Trophic Status of Reservoir(s)	1 Eutrophic and 3 Mesotrophic	
DEP Surface Water Classification	AA	
Watershed Area (total acreage)	6,272 acres	
Preserved Land in the Watershed <sup>a</sup>	1,793 acres	
Predominant Watershed Topography	gentle slopes	
General Land Use and Land Cover in the Watershed b		
-Urban - Commercial or Industrial	0.5%	
-Urban - Residential	13.7%	
-Agricultural	16.6%	
-Undeveloped Land	69.2%	
Significant Potential Contamination Sources		
-Number of inventoried facilities in source water area <sup>c</sup>	1	
-Count of inventoried facilities per square mile	0.10 per sq mile	
-Number of contaminant types within inventoried facilities		
Number of Contaminant Release Points Inventoried by CTDEP d	0	
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<sup>&</sup>lt;sup>a</sup> Preserved land includes any combination of land owned by the public water supply, state forest and parklands, and municipally or privately held land designated as open space.

<sup>&</sup>lt;sup>b</sup> Based on statewide data layer of land use and land cover developed by UCONN Dept of Natural Resource Management Engineering and Connecticut DEP satellite imagery averaged across the entire watershed.

<sup>&</sup>lt;sup>c</sup> Inventoried facilities reflect the actual number of SPCS sites present in the source water area, which may have more than 1 type of contaminant present at the facility.

<sup>&</sup>lt;sup>d</sup> Sites or locations with documented accidental spills, leaks or discharges. While these sources, which are cataloged and tracked by the Connecticut DEP, may fall within a public drinking water supply source water area, they may or may not presently be discharging to the environment or causing contamination of a public drinking water source.